REMARKS

Claims 1-25 are currently pending in the subject application, and are presently under consideration. Claims 1, 10, 11, 16, 20, and 22 have been amended. Claim 8 has been cancelled. Claims 1-25 are rejected. Favorable reconsideration of the application is requested in view of the amendments and comments herein.

I. Provisional Double Patenting Rejection

Claims 1-25 were provisionally rejected in light of copending Application No. 10/634,535. A terminal disclaimer is included with this response to overcome this rejection.

II. Rejection of Claims 1-16 and 20-25 Under 35 U.S.C. §103(a)

Claims 1-16 and 20-25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,278,402 to Pippin ("Pippin") in view of U.S. Patent No. 5,952,959 to Norris ("Norris"). Withdrawal of this rejection is respectfully requested for at least the following reasons.

U.S. Patent 5,952,959 to Norris discloses a system of handheld GPS devices having associated transceivers. The focus of the Norris patent is on finding the relative position of two devices in spite of the error (Selective Availability) that was once introduced into the GPS network to reduce the accuracy of the GPS network for nonmilitary users. In the Norris system, the position of a first device is transmitted to a second device, and the relative location of the devices is determined by subtraction, thus eliminating the common Selective Availability (SA) error associated with the device. For the SA error to cancel out in this manner, it is necessary for the devices to be within a reasonable distance from one another, as the SA error varies with the device location. Accordingly, the Norris system is only intended for use over distances in which direct RF communication between the devices is possible. Norris does not teach a relay system or direct transmission of the device location to a satellite relay.

U.S. Patent 6,278,402 to Pippin discloses a hybrid/handheld GPS system. The Pippin system is implemented as hybrid system, in which a handheld unit is used in combination with a vehicle-based unit. The device offers full functionality when the handheld unit is mounted within the vehicle and limited functionality when the handheld unit is removed from the vehicle. The handheld unit is intended for use within a defined area, and can communicate with a base station associated with that area (e.g., at a golf course clubhouse) or with the vehicle unit. The Pippin device is not, however, operative to transmit directly to a satellite relay, as recited in claim 1. Such functionality is not necessary or desirable in the limited range over which the Pippin device is intended to operate.

Claim 1, as amended, recites a tablet computer assembly including a global positioning system module that produces location information associated with the position of the tablet computer assembly. An L-band transceiver broadcasts the location information directly to a satellite relay and receives location information from the at least one portable communications device via the satellite relay. A processing unit provides messages to the L-band transceiver and updates a display associated with the tablet computer assembly according the received location information and the location information produced at the global positioning system module. Claims 11, 16, and 20 contain similar elements.

The invention defined in claims 1, 11, 16, and 20 integrates GPS functionality and satellite-based communication into a portable tablet computer system. It is respectfully submitted that the claimed device is nonobvious as the design of the claimed device required the solution of a number of problems relating to power management, heat dispersion, and interference between the tablet computer processor and the satellite-based communication system without unduly increasing the size or weight of the device. This is crucial in a dismount communications device, as to be useful, the device must be easily portable and be capable of operating for a significant amount of time without a recharge. It is respectfully submitted that no effective solution to these problems has been taught or suggested in the cited art.

For example, problems with interference are mitigated by implementing the GPS and satellite transceivers as a communications module that is separated from the tablet computer by a Faraday cage (Claim 9). To enhance the portability of the device, the Faraday cage can be utilized as a heat sink to conduct and disperse heat from the amplifiers and other heat producing components of the satellite transceiver (Claim 10), such that heat sensitive components in the tablet computer are not adversely affected. The power requirements of the device are addressed in several ways. To begin with, the tablet computer is operative to be mounted within a vehicle, and its internal power supply can be charged from a power supply associated with the vehicle (Claim 14). When the user departs from the vehicle, an external battery can be affixed to the tablet computer and power management software, operative to control the power consumption of the tablet computer, the transceiver, and the GPS module, utilizes GPS power cycling routines to maintain the GPS almanac data with sufficient accuracy to allow for rapid determination of a user's position at a minimal power expenditure .

Neither Pippin nor Norris describes a portable system having integrated satellite communications, global position system (GPS) capabilities, and a tablet computer. As a result, neither reference provides a teaching that would aid one skilled in the art in overcoming the difficulties (*e.g.*, size, weight, power consumption, heat dispersion, etc.) in designing such a device.. The Norris device provides a GPS device with a relatively short range RF transceiver for direct communication with another device. The interference and heat dissipation problems associated with direct L-band transmission to a satellite is not addressed by the Norris device. Pippin describes a similar device, with a short range RF transceiver operative to broadcast to a nearby golf cart. Even using a much less powerful transceiver, the Pippin device is limited in functionality. (See Col. 4, lines 43-67).

In addition, neither Pippin nor Norris teaches the use of a tablet computer in the device. The Office Action takes Official Notice that "one of ordinary skill in the art would exchange the portable device with a tablet device". Official Notice is appropriate when facts not supported by documentary evidence are "capable of such instant and unquestionable demonstration as to defy dispute." (See M.P.E.P. §2144.03(A), *citing In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418,

420 (CCPA 1970)). It is respectfully submitted that this assertion does not meet that standard. In fact, Pippin teaches contrary to this assertion, as Pippin deliberately foregoes features that might be associated with a tablet computer (*e.g.*, a larger, more detailed display) to avoid problems with size, power consumption, and cost. Instead, these features are provided by the vehicle-based unit, which is supported by the resources of the vehicle and does not suffer the same constraints as portable devices. The entire point of the Pippin patent is to avoid these problems entirely by tying the most resource intensive functions (*e.g.*, enriched display, longer range telemetry) into the vehicle. If the integration of all of these functions into a practical dismount device were obvious to one skilled in the art, the Pippin system would be unnecessary. Accordingly, it is respectfully submitted that claims 1, 11, 16, and 20 is not obvious in light of the teachings of Norris and Pippin.

Each of claims 2-7, 9, 10, 12-15, 17-19, and 21-25 depend directly or indirectly from one of claims 1, 11, 16, and 20, and are thus patentable for the reasons discussed under their respective base claims as well as for their own unique limitations. In the interest of brevity, the discussion of the dependent claims will be limited to a few representative claims, but no concession of the patentability of any omitted claims is intended.

Claim 6, which depends directly from claim 1, recites a single, detachable antenna that can be operatively connected to the tablet computer by a user to facilitate the transmission and reception of messages by the L-band transmitter and the global positioning module. Claim 7, which depends from claim 7, recites the detachable antenna comprises a quadrifilar helix antenna. The Office Action takes Official Notice that detachable quadrifilar helix antennas are known in the art and states that it would be obvious to one skilled in the art to combine a detachable quadrifilar helix antenna to the Norris and Pippin references due to known advantages in the art. It is respectfully requested that the inventor provide an affidavit under 37 C.F.R. 1.104(c)(2) supporting the Examiner's personal knowledge of quadrifilar antennas and explaining the advantages of detachable quadrifilar antennas that would induce one skilled in the art to incorporate a quadrifilar antenna into Norris or Pippin. It is respectfully submitted that the

cited art does not disclose detachable antennas, specifically quadrifilar antennas, and that claims 6 and 7 are patentable over the cited art.

Claim 9, which depends directly from claim 1, recites a Faraday cage that encloses the L-band transceiver to reduce electromagnetic interference. This Faraday cage is utilized to reduce interference in light of the proximity of the L-band transceiver and the tablet computer in the dismount device. Neither of the Norris and Pippin devices incorporates long-range or high power telemetry, and neither device requires a processor that would have the clock speed or power as to produce significant interference between the two units. There is thus no reason for one skilled in the art, confronted with these references, to incorporate a Faraday cage into the device absent the teachings of the present invention. It is thus respectfully submitted that Pippin and Norris fail to teach or suggest the Faraday cage enclosure recited in claim 9.

Claim 10, which depends from claim 9, recites a system in which the Faraday cage is configured as to draw heat from the L-band transceiver away from the processing unit. Nothing in Norris and Pippin teaches or suggest the use of a Faraday cage as a heat sink for an L-band transceiver. It is thus respectfully submitted that claim 10 is patentable over Pippin and Norris.

III. Rejection of Claims 17-19 Under 35 U.S.C. §103(a)

Claims 17-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pippin, and Norris in further view of U.S. Published Patent Application 2005/003253 to Kokkonen. Claims 17-19 depend from claim 16, and are allowable for the reasons discussed with respect to claim 16 as well as for their own unique limitations. Kokkonen does not remedy the deficiencies of Pippin and Norris with respect to claim 16. It is thus respectfuilly submitted that claims 17-19 define over the cited art and the withdrawal of the rejection of claims 17-19 is requested.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that the present application is in condition for allowance. Applicant respectfully requests reconsideration of this application and that the application be passed to issue.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

Date 12/14/05

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